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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/806,198 | 03/23/2004 | York Alexander Beste | 54391 | 2001 |
| 7590 | 11/07/2005 | | EXAMINER | |
| Herbert B. Keil KEIL & WEINKAUF 1350 Connecticut Ave., N.W. Washington, DC 20036 | | | THERKORN, ERNEST G | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1723 | |

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/806,198 | BESTE ET AL. |
| | Examiner | Art Unit |
| | Ernest G. Therkorn | 1723 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 March 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-7 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The metes and bounds of "high-boiling compounds" can not be determined. As such, the claim is considered to be drawn to new matter.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Earle (U.S. Patent Publication No. 2004/0015009). The claims are considered to read on Earle (U.S. Patent Publication No. 2004/0015009). However, if a difference exists between the claims and Earle (U.S. Patent Publication No. 2004/0015009), it would reside in optimizing the elements of Earle (U.S. Patent Publication No. 2004/0015009). It would have been obvious to optimize the elements of Earle (U.S. Patent Publication No. 2004/0015009) to enhance separation.

Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Earle (U.S. Patent Publication No. 2004/0015009) in view of Snyder, Introduction to Modern Liquid Chromatography, John Wiley & Sons New York, 1979, pages 270-272, 285, and 410-411. At best, the claims differ from Earle (U.S. Patent Publication No. 2004/0015009) in reciting use of ion exchange chromatography. Snyder, Introduction to Modern Liquid Chromatography, John Wiley & Sons New York, 1979, pages 270-272, 285, and 410-411 discloses on pages 410-411 that ion exchange was the first of the various liquid chromatography methods to be used widely under modern liquid chromatography conditions. It would have been obvious to use ion exchange chromatography in Earle (U.S. Patent Publication No. 2004/0015009) as his particular type of chromatography because Snyder, Introduction to Modern Liquid Chromatography, John Wiley & Sons New York, 1979, pages 270-272, 285, and 410-411 discloses on pages 410-411 that ion exchange was the first of the various liquid chromatography methods to be used widely under modern liquid chromatography conditions.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Earle (U.S. Patent Publication No. 2004/0015009) in view of Gerhold (U.S. Patent No. 4,402,832). At best, the claim differs from Earle (U.S. Patent Publication No. 2004/0015009) in reciting use of a continuous chromatography process. Gerhold (U.S. Patent No. 4,402,832) (column 1, lines 29-39) discloses that use of a simulated moving bed is a very successful process for separating components from a feed mixture. It would have been obvious to use a continuous chromatography process in Earle (U.S.

Patent Publication No. 2004/0015009) because Gerhold (U.S. Patent No. 4,402,832) (column 1, lines 29-39) discloses that use of a simulated moving bed is a very successful process for separating components from a feed mixture.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Earle (U.S. Patent Publication No. 2004/0015009) in view of Hackh's Chemical Dictionary, McGraw-Hill Book, New York, 1972, page 461 and either Kawaki (U.S. Patent No. 5,543,474) or Thiem (U.S. Patent No. 4,751,291). At best, the claim differs from Earle (U.S. Patent Publication No. 2004/0015009) in the clarity that nitrotoluene is a polar high boiling compound. Hackh's Chemical Dictionary, McGraw-Hill Book, New York, 1972, page 461 discloses that nitrotoluene boils at 218 degrees Celsius. This is considered to be high boiling. Kawaki (U.S. Patent No. 5,543,474) on column 12, lines 8-10 discloses that nitrotoluene is polar. Thiem (U.S. Patent No. 4,751,291) on column 2, lines 36-41 discloses that nitrotoluene is polar. It would have been obvious that Earle (U.S. Patent Publication No. 2004/0015009)'s nitrotoluene is a polar high boiling compound because Hackh's Chemical Dictionary, McGraw-Hill Book, New York, 1972, page 461 discloses that nitrotoluene boils at 218 degrees Celsius and either because Kawaki (U.S. Patent No. 5,543,474) on column 12, lines 8-10 discloses that nitrotoluene is polar or because Thiem (U.S. Patent No. 4,751,291) on column 2, lines 36-41 discloses that nitrotoluene is polar.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Earle (U.S. Patent Publication No. 2004/0015009) in view of Snyder, Introduction to Modern Liquid Chromatography, John Wiley & Sons New York, 1979, pages 270-272,

285, and 410-411. At best, the claims differ from Earle (U.S. Patent Publication No. 2004/0015009) in reciting use of water as a solvent and reversed phase silica gel. Snyder, Introduction to Modern Liquid Chromatography, John Wiley & Sons New York, 1979, pages 270-272, 285, and 410-411 on pages 270-272 and 285 discloses that reversed phase silica gel packings are the closest to a universal system for modern liquid chromatography and that water is usually used as a base solvent. It would have been obvious to use water as a solvent and reversed phase silica gel because Snyder, Introduction to Modern Liquid Chromatography, John Wiley & Sons New York, 1979, pages 270-272, 285, and 410-411 on pages 270-272 and 285 discloses that reversed phase silica gel packings are the closest to a universal system for modern liquid chromatography and that water is usually used as a base solvent.

Claims 1, 2, and 7 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fields (U.S. Patent No. 6,468,495). The claims are considered to read on Fields (U.S. Patent No. 6,468,495). However, if a difference exists between the claims and Fields (U.S. Patent No. 6,468,495), it would reside in optimizing the elements of Fields (U.S. Patent No. 6,468,495). It would have been obvious to optimize the elements of Fields (U.S. Patent No. 6,468,495) to enhance separation.

Claims 1-7 are rejected under 35 U.S.C. 102(A and/or B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wasserscheid (Ionic Liquids in Synthesis). The claims are considered to read on Wasserscheid (Ionic Liquids in Synthesis). However, if a difference exists between the claims and Wasserscheid (Ionic

Liquids in Synthesis), it would reside in optimizing the elements of Wasserscheid (Ionic Liquids in Synthesis). It would have been obvious to optimize the elements of Wasserscheid (Ionic Liquids in Synthesis) to enhance separation.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wasserscheid (Ionic Liquids in Synthesis) in view of Gerhold (U.S. Patent No. 4,402,832). At best, the claim differs from Wasserscheid (Ionic Liquids in Synthesis) in reciting use of a continuous chromatography process. Gerhold (U.S. Patent No. 4,402,832) (column 1, lines 29-39) discloses that use of a simulated moving bed is a very successful process for separating components from a feed mixture. It would have been obvious to use a continuous chromatography process in Wasserscheid (Ionic Liquids in Synthesis) because Gerhold (U.S. Patent No. 4,402,832) (column 1, lines 29-39) discloses that use of a simulated moving bed is a very successful process for separating components from a feed mixture.

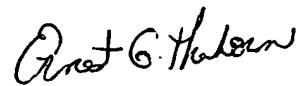
Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free).



Ernest G. Therkorn
Primary Examiner
Art Unit 1723

EGT
November 3, 2005